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| 10/670,338      | 09/26/2003  | Masatoshi Yamada     | 117336              | 5128             |

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EXAMINER

MORRISON, THOMAS A

ART UNIT PAPER NUMBER

3653

DATE MAILED: 09/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/670,338

Applicant(s)

YAMADA ET AL.

Examiner

Thomas A. Morrison

Art Unit

3653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 5 and 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/13/2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Species I, claims 1-4 and 7-18 in the reply filed on August 24, 2005 is acknowledged. The traversal is on the ground(s) that the search and examination of the entire application could be made without serious burden. This is not found persuasive because the instant application includes three (3) patentably distinct species with significantly different operating parameters. Searching for these different operating parameters would place a serious burden upon the examiner.

The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-4 and 7-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. Also, there are a number of antecedent basis problems with the claims. As one example, claim 1 recites

the limitation "the lower part" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Also, it is unclear what is meant in claim 1 by the recited "openable/closable manner" in line 11.

Claim 1 recites the limitation "the predetermined direction" in line 8. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 and its dependent claims are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the structural relationship in claim 1, between the stopper and the other claimed elements which allows the stopper to move vertically. Also, it is unclear as to the structural relationship between the stopper drive device and the other claimed elements that allows the stopper drive device to lower the stopper.

Regarding claim 4, there is insufficient structural relationship between the controller and the stopper drive device, to understand how the recited function is performed. There are similar problems with claims 5 and 6.

In claim 8, it is unclear what is meant by the recited "rotation limit device not to give rotational force to the first gear in the descendent direction of the stopper..."

Regarding claim 9, it is unclear what is meant by the recited "openable/closable manner".

Claim 9 and its dependent claims are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the structural relationship that allows the stopper to move vertically in claim 9, the structural relationship that allows the stopper drive device to lower the stopper, the structural relationship between the controller and the other claimed elements that allows the controller to perform the claimed functions.

Regarding claim 10, it is unclear what structure or structural relationship between the claimed elements allows the first annunciation device to forbid the process of the feed control device and announce a paper jam.

Similar changes are needed to clarify the structural relationships between the claimed elements in claims 11-13.

Applicant should review the claims and correct any grammatical errors and lack of antecedent basis errors.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,285,510 (Kanno et al.).

Regarding claim 1, Figs. 1-4 show a paper feeding apparatus including

a paper feed device (including 11) comprising:

a paper loading board (i.e., including element 2 and the upper surface at numeral 1 in Fig. 2) to load paper obliquely (see Fig. 1). In particular, the dictionary defines the word "oblique" as "1. a. Having a slanting or sloping direction, course, or situation: INCLINED." As such, Fig. 1 shows that the paper board load the paper obliquely.

Moreover, there is an abutting surface (i.e., surface at numeral 1 in Fig. 2) arranged in the lower part of the paper loading board and to which the bottom end of paper loaded on the paper loading board abuts (see paper position in Fig. 1),

a feed roller (11) abutting the surface of the paper to feed the paper to the predetermined direction sheet by sheet (see Fig. 1), and

a manual feed tray (including 5) attached to the paper loading board in an openable/closable manner (see Figs. 2-3);

a stopper (including 12 and 13) arranged to be able to move vertically to the abutting surface (i.e., surface at numeral 1 in Fig. 2) to lift up the bottom end of the paper when positioned higher than the abutting surface; and

a stopper drive device (i.e., linkage mechanism in Figs. 2-3) to lower the stopper (including 12 and 13) below the abutting surface (i.e., surface at numeral

1 in Fig. 2) when the manual feed tray (including 5) is opened (Fig. 3) to be capable of a paper insertion. As shown in Fig. 3, the linkage mechanism pushes element 2 down. As shown in Figs. 1-2, when element 2 is pushed down the stopper (including 12 and 13) is located below the abutting surface (surface at numeral 1 in Fig. 2).

Regarding claim 2, Figs. 1-4 show that the stopper drive device (i.e., linkage mechanism in Figs. 2-3) comprises a linking mechanism arranged between the manual feed tray (5) and the stopper (including 12 and 13) to lower the stopper when the manual feed tray (5) is opened for a paper insertion.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 9, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,633,736 (Park) (hereinafter "the Park patent") in view of U.S. Patent No. 4,285,510 (Kanno et al.).

The Park patent discloses an image formation apparatus (Abstract) including  
an image formation device (100) which forms an image on paper;  
a paper transfer device (near 108) to transfer paper fed from a paper feeding apparatus (116) to the image formation device (100);

a paper detection device (118 or 112) arranged in the paper transfer device (near 108) to detect that paper has been fed to the paper transfer device (near 108); and

a feed control device (e.g., 144) which drives the paper feeding apparatus (116) to feed the paper to the paper transfer device (near 108) when a command to select an automatic paper feed is externally input, subsequently drives the paper transfer device (near 108) to transfer the paper fed from the paper feeding apparatus to the image formation device (100) when the paper detection device (118 or 112) detects the presence of paper, and drives the paper transfer device (near 108) to transfer paper to transfer paper to the image formation device (100). See, e.g., column 4, lines 18 to 60 and column 6, line 15 to column 7, line 17.

The Park patent also discloses a paper feeding apparatus (116) with many of the claimed features, but paper feeding apparatus of the patent does not show a manual feed tray, a stopper, and a stopper drive device, as claimed.

The Kanno et al. patent discloses that it is well known to provide an image forming apparatus with a paper feeding apparatus having a paper feed device with a paper loading board (i.e., including element 2 and the upper surface at numeral 1 in Fig. 2) to load paper obliquely (see Fig. 1),

an abutting surface (i.e., surface at numeral 1 in Fig. 2) arranged in the lower part of the paper loading board and to which the bottom end of paper loaded on the paper loading board abuts (see paper position in Fig. 1),



a feed roller (11) abutting the surface of the paper to feed the paper to the predetermined direction sheet by sheet (see Fig. 1), and

a manual feed tray (including 5) attached to the paper loading board in an openable/closable manner (see Figs. 2-3);

a stopper (including 12 and 13) arranged to be able to move vertically to the abutting surface (i.e., surface at numeral 1 in Fig. 2) to lift up the bottom end of the paper when positioned higher than the abutting surface; and

a stopper drive device (i.e., linkage mechanism in Figs. 2-3) to lower the stopper (including 12 and 13) below the abutting surface (i.e., surface at numeral 1 in Fig. 2) when the manual feed tray (including 5) is opened (Fig. 3) to be capable of a paper insertion.

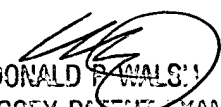
In particular, the Kanno et al. patent explains that such a paper feeding arrangement enables a user to easily input manually fed sheets without having to remove this arrangement from the image forming apparatus. See, e.g., Abstract of Kanno et al. It would have been obvious to one of ordinary skill in the art at the time the invention was made, to provide the image forming apparatus of the Park patent with a sheet feeding arrangement that has a paper loading board, an abutting surface, a feed roller, a manual feed tray, a stopper and a stopper drive device, because such arrangement allows a user to easily input manual sheets into an image forming apparatus without having to remove this arrangement from the image forming apparatus, as taught by Kanno et al.

***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A. Morrison whose telephone number is (571) 272-7221. The examiner can normally be reached on M-F, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Walsh can be reached on (571) 272-6944. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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